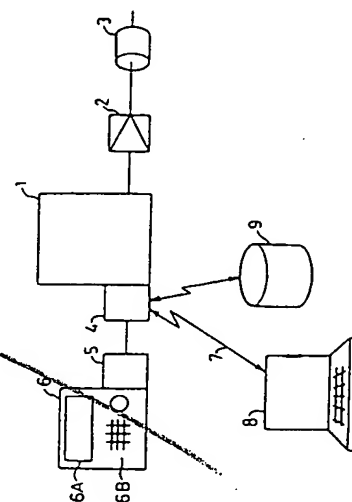


## (54) EDITING METHOD FOR WORK DATA OF PRESS BRAKE

(11) 3-146224 (A) (43) 21.6.1991 (19) JP  
 (21) Appl. No. 64-281969 (22) 31.10.1989  
 (71) AMADA CO LTD (72) OTSUTSUGU KAWAI  
 (51) Int. Cl. B21D5/02

**PURPOSE:** To easily and rapidly make the work data by storing the work data, preserving, displaying the look of the work shapes, selecting the work of the same pattern or the work of similar shape as or to the new work, correcting a part of the data and editing the work data.

**CONSTITUTION:** The man-machine interface 6 provides CRT and the manual data inputting device 6B e.g. the key board, etc., indicates the data from the controller 1 and gives properly the data to the controller and the automatic programming device 8. The automatic programming device 8 generates the NC programming data based on the instructions of the man-machine interface 6, and outputs to the controller 1. The work data storage device 9 stores the work data one by one that are edited by the man-machine interface 6 and are executed by the controller 1. The look of the work shapes is displayed and the same or similar as or to the new work is selected, a part of the work data is corrected and the work data for the new work is edited. Therefore, the necessary work data is easily and rapidly generated.



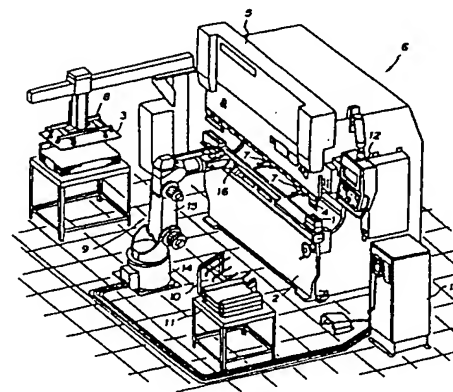
4.5: interface.

## (54) PRESS BRAKE SYSTEM PROGRAMMING DEVICE

(11) 3-146225 (A) (43) 21.6.1991 (19) JP  
 (21) Appl. No. 64-283929 (22) 31.10.1989  
 (71) KOMATSU LTD (72) MASAHIKO KAGEYAMA  
 (51) Int. Cl. B21D5/02

**PURPOSE:** To prevent the interference accident due to the miss inputting, etc., in advance by producing the NC program for the press brake driving based on the inputted work data and automatically producing the robot program based on the common work data.

**CONSTITUTION:** The press brake 6 to bend the work 3 and the robot 9 for press brake to transfer the work in and out are provided. The program to drive the press brake 6 based on the inputted work data is produced. Based on the common work data with the above, the program to drive the robot 9 for the press brake is produced. In such a way, because the programs to drive the press brake 6 and the robot 9 are respectively made, the operation of the operator is reduced. And the interference accident of the press brake with the robot due to miss inputting work data, etc., is prevented in advance.



## (54) PLATE MATERIAL BENDING MACHINE

(11) 3-146226 (A) (43) 21.6.1991 (19) JP  
 (21) Appl. No. 64-286799 (22) 2.11.1989  
 (71) MURATA MACH LTD (72) HIROYUKI KURASHITA  
 (51) Int. Cl. B21D5/04

**PURPOSE:** To simplify the process by setting the press means to press and to spread the side wall of the plate material to the outer side which is clamped with the upper and lower die members on the upper die member at the time of manufacturing the box type goods by bending the plate material.

**CONSTITUTION:** On the case of the bending work of the box 81, the side walls 70, 71 are formed by bending the plate material 69 which is formed with the slit 69, and the upper die members 11 is brought in contact with the plate material 68 and clamps it between the lower die members 12. Next, the pressing means 46 is operated to press and spread the side walls 70, 71 to the outer side, further by operating the cylinders 22, 23 simultaneously the tip part of the plate material 68 is bent to the upper side and the side wall 72 is formed. In succession, the side wall 73 of the opposite side is formed in the same way, by executing spot welding to the ear part 74, each side is mutually fixed. Therefore, the bending with the lapped part provided on the two adjacent sides becomes possible and the working of the post process is made easy.

